

Cornwell (H. G.)  
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## A CLINICAL REPORT

OF ELEVEN CASES OF

# Dislocation of the Crystalline Lens,

—BY—

HENRY G. CORNWELL, M. D.,

YOUNGSTOWN, O.

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IT is desired in this brief paper to present the principal points of interest connected with the histories of a number of cases of Dislocation of the Crystalline Lens, which have come under my observation during my term of service as Resident Surgeon of the Brooklyn Eye and Ear Hospital, and more recently in private practice. These cases serve to illustrate the various forms of partial and complete displacements of this little body from its natural position behind the pupil, and the accompanying inflammatory or other conditions which are occasioned by such an accident.

### CASE FIRST.

James Campbell, aet 58, tradesman, came to the Brooklyn Eye and Ear Hospital April 15th, 1877.

History—While chopping wood, four days before, a splinter flew up striking him in the right eye; sharp pain and loss of sight immediately followed.

Examination—Conjunctival and sub-conjunctival injection, increased tension of the globe, with severe ciliary pain radiating over the forehead. Ophthalmoscope reveals lens partially dislocated, projecting through the pupillary space into the anterior chamber, held in position by the contracted iris.

Vision—Counts fingers at one foot.

Treatment—Taxis was tried under ether for the purpose of restoring it to its normal position, but was unsuccessful. The loss of sight due to the irregular refraction of the rays of light, which the lens caused, and the danger of destruction of the eye from glaucoma, or its fellow by sympathetic ophthalmia, led to its extraction after Graefe's linear method on the following day. It was removed without accident, capsule intact. But little reaction followed, and the eye was treated as after ordinary extractions. Patient was able to read, with proper lenses, ordinary newspaper print twelve days later.

#### CASE SECOND.

John Marks, aet 30, plasterer, visited the Brooklyn Eye and Ear Hospital, September 9th, 1877.

History—While scaling a ceiling the day before a piece of mortar fell striking him in the right eye. The object of his visit was to get some advice in regard to his imperfect sight, and relief from the annoyance of seeing double, this latter condition having become established since his accident.

Examination—A slight contusion of the upper lid and some conjunctival injection were the only external evidences of an injury. Ophthalmoscope revealed a partial dislocation of the lens downwards, its upper border appearing in the pupillary space. From its position the cause of the diplopia was very obvious. Some of the rays of light passed through the lens, and others through the clear pupil above it.

Treatment—as the eye was bearing the injury well, and as the removal of a lens which has not undergone cataractous change is a dangerous procedure, he was advised to wear a shade over the eye to correct the annoyance caused by the double images, and as long as the eye remained free from irritation he could with safety absent himself from the Clinic.

## CASE THIRD.

James Pitcairn, aet 60, entered the Brooklyn Eye and Ear Hospital July 26th, 1877.

History—While hurriedly crossing a street, five years ago, he fell. Upon rising his sight was suddenly found to be impaired in the left eye. No perceptible change took place in his vision until within the last two months, when it decreased rapidly in both eyes.

Examination—Iris tremulous. Ophthalmoscope showed dislocated lens lying in the fundus (left eye). Vitreous fluid and turbid, so that when the globe was turned in any direction opacities started up from about the crystalline body like a cloud of dust. Both eyes were glaucomatous; the left stony hard, with deep excavation of the optic nerve. Tension plus, with commencing excavation of nerve in the right.

Vision—Perception of light in the left;  $\frac{1}{20}$  of normal in the right.

Treatment—As to attempt to remove the lens when the vitreous was so fluid would in all probability empty the eye, he was advised to have it enucleated, and the other operated upon by iridectomy to stay the progress of the disease developed there. He refused, and received his discharge.

## CASE FOURTH.

James Long, aet 15, school-boy, was sent to the Brooklyn Eye and Ear Hospital August 19th, 1877.

History—Was struck in the left eye the previous day with a piece of putty, blown from a "putty blower," in the hands of a companion. He suffered intense pain, which was partially relieved by morphia.

Examination—The eye was, at the time of his visit, very irritable, the peri-corneal vessels strongly injected. A small central abrasion of the cornea was found, and further examination by means of the ophthalmoscope and oblique illumination revealed complete dislocation of the lens into the anterior chamber. The capsule of this body had been ruptured and a quantity of softened cortical matter which had become swollen filled the cavity.



Treatment—A paracentesis of the cornea was done under chloroform, and the aqueous humor, with some softened cortex, evacuated. Atropine and a bandage were used for twenty-four hours, and after this atropine alone, (4 gr. Sol.) During this time the patient had several attacks of iritis, and the pupil became occluded from the agglutination together by inflammatory exudation of the remains of the capsule with the iris. After all circum-corneal injection had subsided, the opaque membrane was pierced with a cataract needle and a pupil of sufficient size torn in it to afford a fair amount of vision.

#### CASE FIFTH.

Thomas Shehan, aet 45, sailor, was sent from the U. S. frigate "Colorado," and admitted to the Hospital September, 22d, 1877.

History—His wife had struck him in the left eye with her fist while they were both under the influence of liquor a few nights before. After his debauch, which lasted some days, the last one of which he spent in a police station, he was sent to the Hospital.

Examination—No pain; the ocular conjunctiva was swollen, due to oedema and extravasated blood. There was a rupture of the eye-ball above and to the nasal side, between the internal and superior-recti muscles through which the lens had escaped; this body was lying on the sclera, underneath the conjunctiva, over the point of rupture. The iris was tremulous and the portion corresponding to the wound prolapsed and adherent. The vitreous chamber was full of blood. His general health was much impaired by his excesses.

Vision—Perception of light. (quantitive.)

Treatment—Under an anaesthetic the lens was removed from the nidus it had formed by making a slight incision over its convexity, through the conjunctiva, with a Beer's knife. The after treatment consisted in the use of atropine and a charpie bandage. Owing to a lack of vigilance on the part of his attendant, on the second morning after the operation, he tore off the bandage and eloped from the Hospital. He spent the day in a carouse, and the following night in the station-house, from which place he was brought to the Hospital the next day by an officer. Atropine and a bandage were again used. Twelve days later he was discharged. The blood in

the vitreous had at that time been almost entirely absorbed. The wife had by a dextrous use of her fist performed a modern and complete Graefe's extraction of the lens.

Vision—The vision of this patient two months after his injury =  $\frac{2}{3}$  of normal.

#### CASE SIXTH.

George Pratt, act 71, shoemaker, was sent to the Brooklyn Eye and Ear Hospital, by his physician, from New Haven, Nov. 13th, 1877.

History—About the middle of the preceding month, while splitting wood, a chip flew up striking him in the right eye; severe smarting pain and loss of sight followed; the former lasted but a few hours being relieved by hot applications. Since that time the condition of the eye had remained unchanged.

Examination—A dilated pupil was the only external manifestation of an accident. Ophthalmoscope revealed dislocation of the lens into the vitreous chamber, where it was found floating in the bottom of the eye, so freely movable that when the patient turned the eye downward it slid over the ciliary body and appeared in the pupillary space. When his body was bent and face directed toward the floor the lens could be seen to slip into its normal position. An interesting feature in this case was that the lens remained perfectly clear a month after its displacement, so that when the sound eye was closed and spectacles adjusted the patient was able to read from the editorial page of the *N. Y. Tribune*; in other words, while lying on his back he could not recognize his friends, but while in the reverse position, on his face, he could read ordinary print.

Vision—=  $\frac{1}{10}$  of normal.

Treatment—Atropine was used with the hope of getting sufficient dilatation of the pupil to enable the lens to be shaken into the anterior chamber. and by the after use of Calabar bean to contract the pupil, and in this manner hold the lens so that it could be extracted after the linear method. An irregular elipsoidal enlargement prevented the accomplishment of this purpose, as the lens could not be driven through. It was then proposed to put the patient under ether and while lying face downward, over the

end of a table, to fix the lens in its natural position by means of a slender extraction knife, to turn him over on his back again, and remove through a linear incision. He refused to have it touched with a knife and asked for his discharge. As the vitreous fluid was already broken up and partially fluid, he was warned of his danger, not only with reference to the injured eye, but also of the risk of its companion becoming subsequently affected through sympathetic irritation. He gave no heed to the advice, left the Hospital and has not since been heard from.

## SEVERAL CASES OCCURRING IN PRIVATE PRACTICE.

### CASE SEVENTH.

Mr. James D., aet 60, farmer, of Poland, O., consulted me April 5th, 1878, in regard to the condition of his right eye, which he had injured some weeks before by striking it against a projecting board while entering his barn after nightfall.

Examination—The globe had been ruptured and the lens was dislocated, lying under the conjunctiva, on the sclera between the external and superior-recti muscles. There was no injection of the lids or ocular conjunctiva, pain or other indications or irritation. Some distortion of the pupil above.

Vision—= $\frac{1}{20}$  of normal.

Treatment—I advised its removal, as its presence in the ciliary region was liable to set up sympathetic inflammatory trouble in the other eye. He accepted the advice, and the following day I removed it with a light scalpel and spoon. Bandages were applied for several days, and with but little attention the eye was restored to its natural appearance. The pupil was distorted, like an inverted keyhole in shape, a portion of the iris being drawn into the cicatrix, (as in case 5.)

### CASE EIGHTH.

Mrs. M., aet 68, Niles, O., consulted me in regard to the condition of her eyes March 15th, 1878.

History—She had been gradually growing blind in the left eye until within but a few weeks, when owing to a jar which she re-



ceived she found her sight suddenly restored. The Ophthalmoscope revealed a cataractous lens, dislocated downward. The senile change in the lens had slowly developed, when it suddenly broke loose from its zonular attachment above, leaving an open crescentic pupil through which the light was admitted. Some opaque striae were observed in the lens of the right eye also.

Treatment—The advice given was that as long as the eye remained free from irritation no operative treatment was necessary.

#### CASE NINTH.

Mr. Z., aet 42, groceryman, Struthers, O., visited me on the 26th ult. for advice in regard to the condition of his left eye.

History—Nothing further could be obtained than that for ten years his sight had been markedly impaired.

Examination—Ophthalmoscope showed lens dislocated into vitreous chamber.

Vision—=  $\frac{1}{2}$  of normal.

Treatment—There were no indications for operative or other treatment, and such advice was given.

#### CASE TENTH.

John F., aet 31, puddler, Youngstown, O., visited me June 6th, 1878.

History—While at work in an iron mill he was struck in his left eye by a piece of iron which flew from the end of a chisel. His physician, Dr. Clark, sent him to me a few hours after the accident.

Examination—A large central abrasion of the cornea was found, with marked ciliary and conjunctival injection; severe pain radiating over the forehead; the anterior chamber was full of blood and the eye very soft. The latter condition afforded good evidence of dislocation of the lens with hemorrhage into the vitreous chamber. Intense inflammatory reaction followed the injury, and the eye was in a threatened condition for several days. The ocular conjunctiva and lids were swollen and severe cephalalgia continued prominent.

Treatment—Hot applications, atropine, (4 gr. Sol.) leeches to the temples and general antiphlogistic treatment. The intra-

ocular blood was absorbed after a few weeks and the lens was found on ophthalmoscopic examination floating in the vitreous chamber. The patient was at this time permitted to go to work and present himself occasionally for examination.

#### CASE ELEVENTH

Mr. J. B., Lowell, O., brought his child to me, a boy of thirteen months, for advice, the 16th ult., in regard to a defective appearance in the right eye, which has existed since birth.

Examination—Iris tremulous, pupil somewhat dilated. With the ophthalmoscope was seen a downward dislocation of the lens, the dark crescentic border of this body appearing in the pupillary space. No coloboma. In this case I considered the luxation to be of spontaneous origin, no history of an accident was given. Eyes of both parents are perfect.

Treatment—None advised.

A dislocated lens, *per se*, affects vision according to its altered position or absence from behind the pupil. The sequel of such an accident is the same as that produced by a shot or other foreign body within the eyeball, viz: glaucoma of one or both eyes, suppurative destruction of the globe, or irrido-choroiditis with sympathetic affection of its fellow. When dislocated into the vitreous chamber the excursive movements of the lens soon breaks up this body and it becomes fluid. The loss of support to the iris causes it to become tremulous or wavy, the latter condition being characteristic of partial or complete displacements.

These accidents are comparatively common among elderly people, in whom the attachment of the lens to the zonula is easily ruptured, and is to be looked for in persons of advanced life when the sight is suddenly lost from a concussion due to a fall or blow.